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Practicum Site: Health Impacts of Degraded Environments

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***Addressing Air Quality Concerns for Nashville Residents
Living in Public Housing***



Introduction: The goal of this practicum is to address air quality concerns for Nashville residents living in public housing. The project is focused on housing within the James A. Cayce Homes in East Nashville, with a few satellite areas included. The partner organization for this practicum was a local nonprofit called Health Impacts of Degraded Environments (HIDE). The Cayce Homes neighborhood has been shown to have extremely high rates of asthma, with residents also vulnerable to older housing, neglected maintenance, and nearby industry. The Metropolitan Development & Housing Agency's (MDHA) *Envision Cayce* initiative is also currently subjecting residents to increased construction activity as the neighborhood is redeveloped. These factors overwhelmingly suggest the need for accurate air quality monitoring within the neighborhood, as well as educating residents on air quality and healthy housing issues.

Methods: The approaches taken to address these issues are three-fold: Placement of indoor and outdoor air quality monitors at homes of participating residents; Conducting three workshops to inform residents on air quality matters; and the establishment of an Air Quality Index (AQI) flag program to give residents a visual signal of each day's air quality.

Results: The monitors used are part of the Purple Air network – allowing residents to access the current air quality data via an online map. Workshops explain the monitoring network, discuss air pollution, and provide tips on healthier living habits for indoor air quality. Attendees are provided with information and healthier domestic products (such as cleaners, insecticide, and detergent that are less likely to trigger respiratory ailments). The AQI flag program uses a colorimetric system to report each day's level of pollution based on the EPA's Air Quality Index categories. AQI Flag launch event was held with over 100 attendees and dozens of sign-ups for future workshops. Data from monitors can show patterns in air pollution and correlation with outdoor/indoor conditions and activities.

Conclusions: The workshops and other outreach efforts should result in a more informed community with the ability to better deal with poor air quality situations. Residents will be equipped with access to real-time air quality data; information on how indoor or outdoor activities affect the air quality; and healthier products for use in the home. The AQI flag program should be a lasting initiative that continues to inform residents and maintain air quality as a consideration in resident activities. It will be an ongoing challenge to address respiratory health concerns for this community as long as housing continues to be substandard and other barriers remain. However, more of the residents are now engaged in the air quality discussion and prepared to take further action.